

556,133

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
9 December 2004 (09.12.2004)

PCT

(10) International Publication Number
WO 2004/107664 A1

(51) International Patent Classification⁷: H04L 12/28

(21) International Application Number:
PCT/KR2004/001308

(22) International Filing Date: 2 June 2004 (02.06.2004)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:
10-2003-0035278 2 June 2003 (02.06.2003) KR

(71) Applicant (for all designated States except US): UT-Starcom Korea Limited [KR/KR]; San 136-1, Ami-ri, Bubal-eub Icheon-si, Kyongki-do 467-701 (KR).

(72) Inventor; and

(75) Inventor/Applicant (for US only): KANG, Tay Wook [KR/KR]; San 136-1, Ami-ri, Bubal-eub Icheon-si, Gyeonggi-do 467-701 (KR).

(74) Agent: YOON, Jee Hong; Hannuri Bldg., 219 Naeja-dong, Chongno-gu, Seoul 110-053 (KR).

(51) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

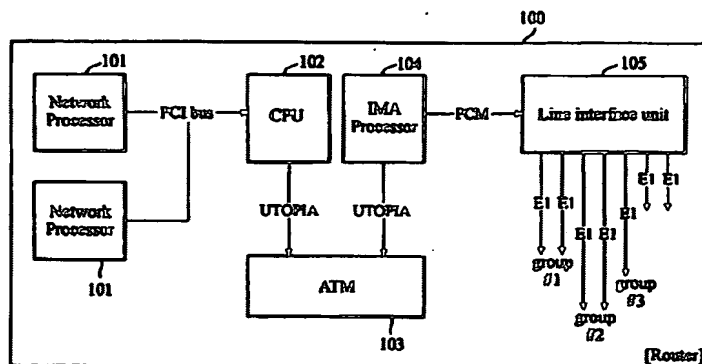
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ROUTER FOR SUPPORTING IMA FUNCTION IN A MOBILE COMMUNICATION NETWORK



(57) Abstract: The present invention relates to a router supporting an Inverse Multiplexing over ATM (IMA) function in a mobile communication network. The router in accordance with the present invention comprises a CPU for converting a plurality of Ethernet packets inputted from network processors connected to subscribers into ATM cells and outputting the converted ATM cells, and for converting a plurality of ATM cells inputted from the CPU into Ethernet packets and disturbing the converted Ethernet packets to the network processors; an ATM multiplexer/demultiplexer connected to the CPU for multiplexing or demultiplexing the ATM cells; an IMA processor connected to the ATM multiplexer/demultiplexer for converting the ATM cells inputted from the ATM multiplexer/demultiplexer into Pulse Code Modulation (PCM) packets and grouping the PCM packets, and for converting the grouped PCM packets into ATM cells and outputting the converted ATM cells to the ATM multiplexer/demultiplexer; and a line interface unit for transmitting the grouped PCM packets to a general network via a line (e.g., E1 or T1) and outputting grouped PCM packets inputted from the general network to the IMA processor. Because the router of the present invention incorporates the CSU/DSU and IMA functions therein, data services can be provided in a bandwidth broader than the E1/T1 bandwidth.